

Appl. No. 10/715,878
Amdt. dated December 2, 2005
Reply to Office Action of September 20, 2005

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application;

Listing of Claims:

1. (Currently Amended) A network interface device located at a customer's premises, comprising:

~~an~~ a first external interface that receives a plurality of telecommunication services via a coaxial connection from a telecommunication service provider, wherein the services are received using Data Over Cable Service Interface Specifications;

a second external interface that receives an additional telecommunication service;

at least two distinct internal interfaces that distribute the plurality of telecommunication services and the additional telecommunication service to at least two distinct internal transport media; and

a processor programmed to:

receive combined signals comprising the telecommunication services from the first external interface;

process the combined signals into separate signals representative of distinct telecommunication services;

receive an additional signal comprising the additional telecommunication service from the second external interface;

combine the additional signal and at least one of the separate signals to create a first combined signal; and

Appl. No. 10/715,878
Amdt. dated December 2, 2005
Reply to Office Action of September 20, 2005

PATENT

map the first combined signal and each of the remaining separate signals to separate ones of the at least two distinct internal interfaces for distribution at the customer's premises via the internal transport media.

2. (Currently Amended) The network interface device of claim 1, wherein the first external interface is further configured to direct signals relating to the telecommunication services to the telecommunication service provider via the coaxial connection using Data Over Cable Service Interface Specifications.

3. (Original) The network interface device of claim 1, wherein at least one of the at least two distinct internal interfaces is configured to receive signals relating to one of the telecommunication services from one of the internal transport media.

4. (Currently Amended) The network interface device of claim 1, wherein the processor is further programmed to:

receive separate signals from the at least two distinct internal transport media;

process the separate signals into a second combined signal; and

direct the second combined signal to the external interface for distribution to the telecommunication service provider via the coaxial connection using Data Over Cable Service Interface Specifications.

5. (Original) The network interface device of claim 1, further comprising a signal integrator in communication with the at least two distinct internal interfaces, wherein the signal integrator is operable to integrate signals from the at least two distinct internal transport media into a combined information set.

6. (Original) The network interface device of claim 1, wherein at least one of the internal transport media comprises a coaxial cable.

Appl. No. 10/715,878
Amdt. dated December 2, 2005
Reply to Office Action of September 20, 2005

PATENT

7. (Original) The network interface device of claim 1, wherein at least one of the internal transport media comprises a twisted pair cable.

8. (Original) The network interface device of claim 7, wherein the twisted pair cable comprises existing telephone wiring at the customer premises.

9. (Original) The network interface device of claim 7, wherein the twisted pair cable comprises an Ethernet cable.

10. (Original) The network interface device of claim 1, wherein the telecommunication services comprise one or more selections from the group consisting of video, data, and voice.

11. (Original) The network interface device of claim 10, wherein different telecommunication services are transported in different frequency ranges.

12. (Original) The network interface device of claim 1, wherein the internal interfaces comprise a selection from the group consisting of IEEE 1394, RG6, RG59, wireless interface, 802.11, LMDS, Ethernet, twisted pair, category 3, category 4, category 5, category 6, category 7, and coaxial.

13. (Original) The network interface device of claim 1, wherein signals are transported on the internal transport media using a protocol selected from the group consisting of HPNA, HPNA+, and Home Plug.

14. (Currently Amended) The network interface device of claim 1, wherein:
the plurality of telecommunication services originate from a plurality of telecommunication service providers; and

the additional telecommunication service originates from a different telecommunication provider.

Appl. No. 10/715,878

Amdt. dated December 2, 2005

Reply to Office Action of September 20, 2005

PATENT

15. (Currently Amended) A system for providing telecommunication services to a customer's premises, comprising:

~~an~~ a first external transport medium comprising a coaxial distribution system that uses Data Over Cable Service Interface Specifications to deliver ~~the~~ a plurality of telecommunication services to the customer's premises;

a second external transport medium comprising a fiber optic distribution system that delivers an additional telecommunication service to the customer's premises;
and

a network interface device at the customer's premises, wherein the network interface device comprises:

an a first external interface that receives ~~a~~ the plurality of telecommunication services via the first external transport medium;

a second external interface that receives the additional telecommunication service via the second external transport medium;

at least two distinct internal interfaces that distribute the plurality of telecommunication services to at least two distinct internal transport media; and

a processor programmed to:

receive combined signals comprising the telecommunication services from the first external interface;

process the combined signals into separate signals representative of distinct telecommunication services;

receive an additional signal comprising the additional telecommunication service from the second external interface;

Appl. No. 10/715,878
Amdt. dated December 2, 2005
Reply to Office Action of September 20, 2005

PATENT

combine the additional signal and at least one of the separate signals to create a first combined signal; and

map the combined signal and each of the remaining separate signals to separate ones of the at least two distinct internal interfaces for distribution at the customer's premises via the internal transport media.

16. (Currently Amended) The system of claim 15, wherein the first external interface is further configured to direct signals relating to the telecommunication services to the telecommunication service provider via the coaxial connection using Data Over Cable Service Interface Specifications.

17. (Original) The system of claim 15, wherein at least one of the at least two distinct internal interfaces is configured to receive signals relating to one of the telecommunication services from one of the internal transport media.

18. (Currently Amended) The system of claim 15, wherein the processor is further programmed to:

receive separate signals from the at least two distinct internal transport media;

process the separate signals into a second combined signal; and

direct the second combined signal to the external interface for distribution to the telecommunication service provider via the coaxial connection using Data Over Cable Service Interface Specifications.

19. (Original) The system of claim 15, further comprising a signal integrator in communication with the at least two distinct internal interfaces, wherein the signal integrator is operable to integrate signals from the at least two distinct internal transport media into a combined information set.

Appl. No. 10/715,878

Amdt. dated December 2, 2005

Reply to Office Action of September 20, 2005

PATENT

20. (Original) The system of claim 15, wherein at least one of the internal transport media comprises a coaxial cable.

21. (Original) The system of claim 15, wherein at least one of the internal transport media comprises a twisted pair cable.

22. (Original) The system of claim 21, wherein the twisted pair cable comprises existing telephone wiring at the customer premises.

23. (Original) The system of claim 21, wherein the twisted pair cable comprises an Ethernet cable.

24. (Original) The system of claim 15, wherein the telecommunication services comprise one or more selections from the group consisting of video, data, and voice.

25. (Original) The system of claim 24, wherein different telecommunication services are transported in different frequency ranges.

26. (Original) The system of claim 15, wherein the internal interfaces comprise a selection from the group consisting of IEEE 1394, RG6, RG59, wireless interface, 802.11, LMDS, Ethernet, twisted pair, category 3, category 4, category 5, category 6, category 7, and coaxial.

27. (Original) The system of claim 15, wherein signals are transported on the internal transport media using a protocol selected from the group consisting of HPNA, HPNA+, and Home Plug.

28. (Currently Amended) The system of claim 15, wherein:

the plurality of telecommunication services originate from a plurality of telecommunication service providers; and

Appl. No. 10/715,878
Amdt. dated December 2, 2005
Reply to Office Action of September 20, 2005

PATENT

the additional signal and the at least one of the separate signals originate from the same telecommunication service provider of the plurality.

29. (Currently Amended) A method of delivering a plurality of telecommunication services to a customer's premises, comprising:

receiving combined signals comprising the telecommunication services from a telecommunication service provider via ~~an~~ a first external interface to a coaxial connection, wherein the services are received using Data Over Cable Service Interface Specifications;

receiving an additional signal comprising an additional telecommunication service from the telecommunication service provider via a second external interface to a wireless receiver;

processing the combined signals into separate signals representative of distinct telecommunication services;

combining the additional signal and at least one of the separate signals to create a first combined signal; and

mapping the first combined signal and each of the remaining separate signals to separate ones of at least two distinct internal interfaces to at least two distinct internal transport media for distribution at the customer's premises via the internal transport media.

30. (Currently Amended) The method of claim 29, wherein the first external interface is further configured to direct signals relating to the telecommunication services to the telecommunication service provider via the coaxial connection using Data Over Cable Service Interface Specifications.

31. (Original) The method of claim 29, wherein at least one of the at least two distinct internal interfaces is configured to receive signals relating to one of the telecommunication services from one of the internal transport media.

Appl. No. 10/715,878
Amdt. dated December 2, 2005
Reply to Office Action of September 20, 2005

PATENT

32. (Currently Amended) The method of claim 29, further comprising:
receiving separate signals from the at least two distinct internal transport media;
processing the separate signals into a second combined signal; and
directing the second combined signal to the external interface for distribution to the telecommunication service provider via the coaxial connection using Data Over Cable Service Interface Specifications.
33. (Original) The method of claim 29, further comprising integrating signals from the at least two distinct internal transport media into a combined information set.
34. (Original) The method of claim 29, wherein at least one of the internal transport media comprises a coaxial cable.
35. (Original) The method of claim 29, wherein at least one of the internal transport media comprises a twisted pair cable.
36. (Original) The method of claim 35, wherein the twisted pair cable comprises existing telephone wiring at the customer premises.
37. (Original) The method of claim 35, wherein the twisted pair cable comprises an Ethernet cable.
38. (Original) The method of claim 29, wherein the telecommunication services comprise one or more selections from the group consisting of video, data, and voice.
39. (Original) The method of claim 38, wherein different telecommunication services are transported in different frequency ranges.
40. (Original) The method of claim 29, wherein the internal interfaces comprise a selection from the group consisting of IEEE 1394, RG6, RG59, wireless interface, 802.11,

Appl. No. 10/715,878

Amdt. dated December 2, 2005

Reply to Office Action of September 20, 2005

PATENT

LMDS, Ethernet, twisted pair, category 3, category 4, category 5, category 6, category 7, and coaxial.

41. (Original) The method of claim 29, wherein signals are transported on the internal transport media using a protocol selected from the group consisting of HPNA, HPNA+, and Home Plug.

42. (Canceled)

43. (New) The network interface device of claim 1, wherein the second external interface receives the additional telecommunication service via a selection from the group consisting of a satellite receiver, an other wireless receiver, a fiber optic receiver, and a twisted copper pair receiver.

44. (New) The network interface device of claim 1, wherein the additional signal comprises an analog signal and the at least one of the separate signals comprises a digital signal.

45. (New) The network interface device of claim 1, wherein:
the additional signal comprises a digital signal;
the at least one of the separate signals comprises a digital signal; and
the combined signal comprises an analog signal.